

IN THE CLAIMS:

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1. In a microelectronic device, a structure on a substrate comprising:

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a diffusion barrier layer disposed above and on the substrate, the diffusion barrier layer having a first thickness and a first dielectric constant, wherein the first thickness comprises a range from about one atomic monolayer to about 1000 angstroms;

an etch stop layer above and on the diffusion barrier layer, the etch stop layer having a second thickness and a second dielectric constant; and

an interlayer dielectric (ILD) layer disposed above and on the etch stop layer, wherein the structure has an effective dielectric constant in the range less than about 3.

9. In a microelectronic device, a structure comprising:

a substrate having an upper surface;

an electrically conductive trace in the substrate;

B2
a diffusion barrier layer above and on the substrate and the trace, wherein the diffusion barrier layer comprises a thickness in a range from about one atomic monolayer to about 1000 angstroms;

an etch stop layer above and on the diffusion barrier layer; and

an ILD layer disposed above and on the etch stop layer, wherein the diffusion barrier layer and the etch stop layer are mutually exclusively selected from either an organic composition or an inorganic composition.

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16. An article of manufacture comprising:

a semiconductor substrate;

a first dielectric layer disposed above and on the substrate, wherein the first dielectric layer comprises a thickness in a range from about one atomic monolayer to about 1000 angstroms; C

B³
a second dielectric layer disposed on the first dielectric layer;

an inter layer dielectric (ILD) layer disposed on the second layer; and

a conductive damascene article, wherein the conductive damascene article is in contact

with the substrate, the first dielectric layer, the second dielectric layer, and the ILD layer; and

wherein the first dielectric layer is an inorganic composition, and wherein the second dielectric layer is an organic composition.

Please cancel claim 2 and 11, without prejudice.